Program: Biomedicínské vědy / Biomedical Sciences  
Specializace: Biochemie a molekulární biologie / Biochemistry and Molecular Biology  
Forma studia: prezenční  
Školitel: Dr. Pavel Krejčí

Research topic: Non-canonical signaling of human receptor tyrosine kinases (Neobvyklé signální dráhy lidských receptorových tyrozinových kináz)

Summary: The major focus of dr. Krejčí Laboratory research for over 15 years has been to dissect the mechanisms of fibroblast growth factor (FGF) signalling. We are interested in pathological FGF-receptor (FGFR) signaling in disease, namely the skeletal disorders caused by activating mutations in FGFR3 (hypochondroplasia, achondroplasia, thanatophoric dysplasia, SADDAN). Our studies encompass many different areas of the FGF field including expression of FGF ligands in vivo, mechanisms of FGF/FGFR-mediated regulation of cell function, molecular mechanisms of FGFR signal transduction, biochemistry of FGFR kinase activation, development of FGFR inhibitors, and others. In our research, we actively collaborate with other scientists worldwide, including those from Norway (Dr. A. Wiedlocha, Oslo University), USA (Dr. D. Krakow, University of California Los Angeles; Dr. K. Hristova, John Hopkins University, Baltimore) and the Czech Republic (Dr. L. Trantirek, Masaryk University CEITEC, Brno; Dr. P. Konik, University of South Bohemia, Ceske Budejovice; Dr. M. Buchtova, Masaryk University).

Requirements on applicants:  
- MSc degree in cellular and molecular biology, biochemistry or similar field  
- Basic training in modern molecular biology techniques  
- Well-organized, motivated and passionate about research  
- English on communicative level is an advantage


Publications:  
All research outcomes may be seen at http://www.achondroplasia-registry.cz/index-en.php?pg=research

General information on the PhD programme and a guide How to Apply